

Title (en)  
Developing apparatus

Title (de)  
Entwicklungsvorrichtung

Title (fr)  
Appareil de développement

Publication  
**EP 1489466 A2 20041222 (EN)**

Application  
**EP 04014114 A 20040616**

Priority  
• JP 2003172015 A 20030617  
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• JP 2003307593 A 20030829

Abstract (en)  
A developing apparatus includes a developer carrying member, disposed opposite to an image bearing member, for carrying developer which is caused to jump from the developer carrying member to the image bearing member to develop an electrostatic latent image formed on said image bearing member by creating an oscillation electric field between the image bearing member and the developer carrying member at an opposing portion where the image bearing member and the developer carrying member are opposed to each other; and a jumping developer regulation member for regulating an area in which the developer is caused to jump in the opposing portion. The jumping developer regulation member is disposed apart from the developer carried by the developer carrying member and is an insulating member or an electrically floating member.

IPC 1-7  
**G03G 15/08**

IPC 8 full level  
**G03G 15/06** (2006.01); **G03G 15/08** (2006.01)

CPC (source: EP KR US)  
**G03G 15/0808** (2013.01 - KR); **G03G 15/081** (2013.01 - KR); **G03G 15/0813** (2013.01 - EP KR US); **G03G 15/0849** (2013.01 - KR); **G03G 21/181** (2013.01 - KR); **G03G 21/1814** (2013.01 - KR); **G03G 2215/0619** (2013.01 - EP KR US)

Citation (applicant)  
• US 4841332 A 19890620 - HANEDA SATOSHI [JP], et al  
• JP H0611972 A 19940121 - KONISHIROKU PHOTO IND  
• JP H0895373 A 19960412 - KONISHIROKU PHOTO IND  
• JP H09106181 A 19970422 - KATSURAGAWA DENKI KK

Designated contracting state (EPC)  
CH DE FR GB IT LI

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**EP 1489466 A2 20041222**; **EP 1489466 A3 20090513**; **EP 1489466 B1 20140226**; CN 1573602 A 20050202; CN 1573602 B 20101006; KR 100657447 B1 20061214; KR 20040111086 A 20041231; US 2005008401 A1 20050113; US 7415230 B2 20080819

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**EP 04014114 A 20040616**; CN 200410048330 A 20040617; KR 20040044765 A 20040617; US 86575904 A 20040614